

IN THE UNITED STATE PATENT AND TRADEMARK OFFICE

**COMBINED DECLARATION AND POWER OF  
ATTORNEY FOR UTILITY PATENT APPLICATION**

As a below named inventor, I hereby declare that:

My residence, post office and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

**HIGH SPEED ACCESS SYSTEM OVER COPPER CABLE PLANT**

       the specification of which is attached hereto.

X was filed on February 22, 2000 as United States Application Number or PCT International Application Number 09/510,550 and was amended on        (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56 a copy of which is attached hereto.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date

I hereby claim the benefit under 35 U.S.C. 119(e) of any United States provisional application(s) listed below.

Application Number(s)	Filing Date
60/121,228	February 23, 1999

I hereby claim the benefit under 35 U.S.C. 120 of any United States application(s), or 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this applications is not disclosed in the prior United States or PCT international application in the manner provided by the first

paragraph of 35 U.S.C. 112, I acknowledge that duty to disclose information which is material to patentability as defined in 37 CFR 1.56 which became available between the filing date of the prior application and the national of PCT international filing date of this application.

U.S. Parent Application or PCT Number	Parent Filing Date	Parent Patent Number (if applicable)

As a named inventor, I hereby appoint the following registered attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected herewith:

Name	Registration Number	Name	Registration Number
Gordon D. Coplein	19,165	Adda C. Gogoris	29,714
William F. Dudine, Jr.	20,569	Martin E. Goldstein	20,869
Michael J. Swedler	19,937	Bert J. Lewen	19,407
S. Peter Ludwig	25,351	Henry Sternberg	22,408
Paul Fields	20,298	Peter C. Schechter	31,662
Mark S. Gross	19,614	Robert Schaffer	31,194
Joseph B. Lerch	26,936	Scott Lindvall	40,325
Melvin C. Garner	26,272	Robert C. Sullivan, Jr.	30,449
Ethan Horwitz	27,646	Ira J. Levy	35,587
Beverly B. Goodwin	28,417	Joseph R. Robinson	33,448
Howard Zaretsky	38,669		

Direct all correspondence to:

Peter Ludwig  
Darby & Darby  
805 Third Ave  
New York NY 10022-7513

Direct all telephone calls to Peter Ludwig at 212.527.7770 and all facsimile correspondence to 212.753.6237.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Signature of First or Sole Inventor: Tuvia Barlev Date: 25/5/02

Name: Tuvia Barlev  
Residence: 56 Keshet St., Rosh HaAyin, Israel  
PO Address:  
Citizenship: Israel

Signature of Second Inventor: Arkady Molev Shtayman Date: 16/5/02

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Residence: 5B David Hamelech St., Bnai Brak, Israel  
PO Address:  
Citizenship: Israel

Signature of Third Inventor: Amir Kanchuk Date: 25/5/02

Name: Amir Kanchuk  
Residence: 7 Haetzet St., Ramat Gan, Israel  
PO Address:  
Citizenship: Israel

Signature of Fourth Inventor: Gilad Rozen Date: 25/5/02

Name: Gilad Rozen  
Residence: 35 Hahagana St., Herzelia, Israel  
PO Address:  
Citizenship: Israel

Signature of Fifth Inventor: Ishai Ilani Date: 25/5/02

Name: Ishai Ilani  
Residence: Dolev DN, Modiin, Israel  
PO Address:  
Citizenship: Israel

Signature of Sixth Inventor: Ofer Sharon Date: 25/5/02

Name: Ofer Sharon  
Residence: 34 Hatizmoret St., Rishon Letzion, Israel  
PO Address:  
Citizenship: Israel

Signature of Seventh Inventor: Robert Shilton Date: 25/5/02

Name: Robert Shilton  
Residence: 126 Hahagana St., Ra'anana, Israel  
PO Address:  
Citizenship: Israel

TITLE 37 CODE OF FEDERAL REGULATIONS §1.56

DUTY TO DISCLOSE INFORMATION MATERIAL TO PATENTABILITY

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is cancelled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is cancelled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§1.97(b)-(d) and 1.98.<sup>1</sup> However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

- (1) prior art cited in search reports of a foreign patent office in a counterpart application, and
- (2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

- (1) it establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or
- (2) it refutes, or is inconsistent with, a position the applicant takes in:
  - (i) opposing an argument of unpatentability relied on by the Office; or
  - (ii) asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

- (1) each inventor named in the application;
- (2) each attorney or agent who prepares or prosecutes the application; and
- (3) every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.

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<sup>1</sup> §§1.97(b)-(d) and 1.98 relate to the timing and manner in which information is to be submitted to the Office.

## ASSIGNMENT

WHEREAS, WE,

Inventor Name	Address	Nationality
Tuvia Barlev	56 Keshet St., Rosh HaAyin, Israel	Israel
Arkady Molev Shtayman	5B David Hamelech St., Bnai Brak, Israel	Israel
Amir Kanchuk	7 Haetzel St., Ramat Gan, Israel	Israel
Gilad Rozen	35 Hahagana St., Herzelia, Israel	Israel
Ishai Ilani	Dolev DN, Modiin, Israel	Israel
Ofer Sharon	34 Hatzimoret St., Rishon Letzion, Israel	Israel
Robert Shilton	126 Hahagana St., Ra'anana, Israel	Israel

hereinafter called 'Assignors', have made certain inventions in

## HIGH SPEED ACCESS SYSTEM OVER COPPER CABLE PLANT

described in an application for Letters Patent filed by us on February 22, 2000 as United States Application Number 09/510,550, and

WHEREAS,

Actelis Networks Inc.  
1301 Marina Village Pkwy  
Suite 320  
Alameda CA 94501

a Delaware corporation, hereinafter called 'Assignee', is desirous of securing an undivided One Hundred Percent (100%) of the entire right, title and interest in and to the said inventions, applications and Letters Patent, when granted, and in and to any divisions, continuations, continuations-in-part, improvements, reissues or extensions that may be granted on any of them;

NOW, THEREFORE, BE IT KNOWN that for and in consideration of the sum of One Dollar (\$1.00) to us in hand paid by the said Assignee, and other good and valuable consideration, the receipt of which is hereby acknowledged, we, the Assignors, have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over unto the said Assignee, its successors and assigns, an undivided One Hundred Percent (100%) of the entire right, title and interest throughout the world in and to the said inventions, applications, Letters Patent, when granted, and in and to any divisions, continuations, continuations-in-part, improvements, reissues or extensions that may be made or granted on any of them;

TO HAVE AND TO HOLD the same to the full end of the term or terms for which said Letters Patent may be granted, as fully and completely as the same might be held by us had this sale and assignment not been made.

For the consideration aforesaid, we hereby covenant and agree to and with the said Assignee, its successors and assigns what whenever its counsel or representative, or the counsel or representative of its successors or assigns, shall advise of, or any other proceeding or action in connection with said application or inventions, including

interference proceedings, is lawful and desirable, or that a reissue or continuation, continuation-in-part or extension of said Letters Patent is lawful and desirable, we will sign all lawful papers and drawings, execute all divisional, continuation, reissue and substitute applications, take all rightful oaths and affidavits, testify in any legal proceedings, and do all acts necessary or required to be done for the reissue of continuation, continuation-in-part or extension of same, and will do all acts necessary or required to secure to the said Assignee, its successors and assigns, the title to and full benefit of all rights hereby assigned, without charge to said Assignee or its successors or assigns, but at its or their expense.

AND the Commissioner of Patents and Trademarks is requested to issue the said Letters Patent, when granted, in accordance with this sale and assignment.

For the consideration aforesaid, we have sold, assigned, transferred and set over and by these presents do sell, assign, transfer and set over unto the said Assignee, its successors and assigns, or the nominees of any of them, an undivided One Hundred Percent (100%) of the entire right, title and interest in and to any and all Letters Patent for said inventions which may be granted in countries foreign to the United States, and in and to any applications for Letters Patent which may be filed for said inventions in countries foreign to the United States, and in and to the inventions described in said applications; and we hereby authorize and empower said Assignee and its successors, assigns or nominees, to apply for Letters Patent or other form of protection on said inventions in its own name or in the name of its successors, assigns or nominees, in any or all countries where it may desire to file such applications, and where said applications may be filed by other than the inventor; and we hereby covenant and agree to sign all papers and drawings, take all rightful oaths, execute all rightful affidavits, and do all acts necessary or required to be done for the procurement and maintenance of Letters Patent or other form of protection for said inventions in countries foreign to the United States, and for further investing or confirming the right and title thereto in the Assignee, its successor, assigns or nominees, but at its or their expense.

x Tuvia Barlev 1741-674

Tuvia Barlev



Witnessed By: x R. Barlev Date: x 25/05/2005

x Ilia Yotova

Witnessed By: x Ilia Yotova Date: x 25/05/2005

x Arkady Molev Shtayman



Witnessed By: x R. Barlev Date: x 25/05/2005

x Ilia Yotova

Witnessed By: x Ilia Yotova Date: x 25/05/2005

Amir Kanchuk

Amir Kanchuk

Witnessed By: SHARON PELEG ~~✓~~ Date: 19.6.00

Witnessed By: Galit Shulser Date: 19.6.00

Gilad Rozen

Gilad Rozen

Witnessed By: SHARON PELEG ~~✓~~ Date: 19.6.00

Witnessed By: Galit Shulser Date: 19.6.00

Ishai Ilani

Ishai Ilani

Witnessed By: SHARON PELEG ~~✓~~ Date: 19.6.00

Witnessed By: Galit Shulser Date: 19.6.00

Ofer Sharon ~~✓~~

Ofer Sharon

Witnessed By: SHARON PELEG ~~✓~~ Date: 19.6.00

Witnessed By: Galit Shulser Date: 19.6.00

Robert Shilton ~~✓~~

Robert Shilton

Witnessed By: SHARON PELEG ~~✓~~ Date: 19.6.00

Witnessed By: Galit Shulser Date: 19.6.00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Title: HIGH SPEED ACCESS SYSTEM OVER COPPER CABLE PLANT

Applicant, Patentee or Identifier: Tuvia Barlev et al.

Application or Patent No.: 09/510,550

Filed or Issued: February 22, 2000

**VERIFIED STATEMENT CLAIMING SMALL ENTITY STATUS  
37 CFR 1.9(f) AND 1.27(c) – SMALL BUSINESS CONCERN**

I hereby state that I am

the owner of the small business concern identified below:  
 an official of the small business concern empowered to act on behalf of the concern identified below:

Name of Small Business Concern:

Actelis Networks Inc.

Address of Small Business Concern:

1301 Marina Village Pkwy  
Suite 320  
Alameda CA 94501

I hereby state that the above identified small business concern qualifies as a small business concern as defined in 13 CFR Part 121 for purposes of paying reduced fees to the United States Patent and Trademark Office. Questions related to size standards for a small business concern may be directed to: Small Business Administration, Size Standards Staff, 409 Third Street, SW, Washington, DC 20416.

I hereby state that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention described in:

the specification filed herewith with title as listed above.  
 the application identified above.  
 the patent identified above.

If the rights held by the above identified small business concern are not exclusive, each individual, concern or organization having rights in the invention must file separate statements as to their status as small entities, and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person made the invention, or by any concern which would qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern or organization having existing rights in the invention is listed below:

no such person, concern, or organization exists.  
 each such person, concern, or organization is listed below.

Separate statements are required from each named person, concern or organization having rights to the invention stating their status as small entities. (37 CFR 1.27)

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate; (37 CFR 1.28(b))

Name of person signing:  GILAD REZENI

Title of person signing:  VP Technologies

Address of person signing:  35 Hohlgasse + 48126 Kassel, Germany

Signature: Gilad Rezeni Date: 25/07/2018

Title 37 CODE OF FEDERAL REGULATIONS § 1.9(c-f)

(c) An independent inventor as used in this chapter means any inventor who (1) has not assigned, granted, conveyed, or licensed, and (2) is under no obligation under contract or law to assign, grant, convey, or license, any rights in the invention to any person who could not likewise be classified as an independent inventor if that person had made the invention, or to any concern which would not qualify as a small business concern or a nonprofit organization under this section.

(d) A small business concern as used in this chapter means any business concern as defined by the Small Business Administration in 13 CFR 121.1301 through 121.1305, which define a small business concern as one whose number of employees, including those of its affiliates, does not exceed 500 persons and which has not assigned, granted, conveyed, or licensed, and is under no obligation under contract or law to assign, grant, convey or license, any rights in the invention to any person who could not be classified as an independent inventor if that person had made the invention, or to any concern which would not qualify as a small business concern or a nonprofit organization under this section. Questions related to size standards for a small business concern may be directed to: Small Business Administration, Size Standards Staff, 409 Third Street, SW., Washington, DC 20416.

(e) A nonprofit organization as used in this chapter means (1) a university or other institution of higher education located in any country; (2) an organization of the type described in section 501(c)(3) of the Internal Revenue Code of 1954 (26 U.S.C. 501(c)(3)) and exempt from taxation under section 501(a) of the Internal Revenue Code (26 U.S.C. 501(a)); (3) any nonprofit scientific or educational organization qualified under a nonprofit organization statute of a state of this country (35 U.S.C. 201(i)); or (4) any nonprofit organization located in a foreign country which would qualify as a nonprofit organization under paragraphs (e)(2) or (3) of this section if it were located in this country.

(f) A small entity as used in this chapter means an independent inventor, a small business concern or a nonprofit organization.



161,354  
UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

OCTOBER 05, 2000

PTAS

DARBY & DARBY P.C.  
S. PETER LUDWIG  
805 THIRD AVENUE  
27TH FLOOR  
NEW YORK, NY 10022-7513

**CORRECTED  
NOTICE**



\*101466783A\*

**RECEIVED**

21.11.2000

RECORDED 11/21/2000

UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 06/27/2000

REEL/FRAME: 010885/0178  
NUMBER OF PAGES: 4

BRIEF: ASSIGNMENT OF ASSIGNEE'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNEE:  
BARLEV, TUVIA

DOC DATE: 05/25/2000

ASSIGNEE:  
SHTAYMAN, ARKADY MOLEV

DOC DATE: 05/25/2000

ASSIGNEE:  
KANCHUK, AMIR

DOC DATE: 06/19/2000

ASSIGNEE:  
ROZEN, GILAD

DOC DATE: 06/19/2000

ASSIGNEE:  
ILANI, ISHAI

DOC DATE: 06/19/2000

ASSIGNEE:  
SHARON, OFER

DOC DATE: 06/19/2000

ASSIGNEE:  
SHILTON, ROBERT

DOC DATE: 06/19/2000

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010885/0178 PAGE 2

ASSIGNEE:

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SERIAL NUMBER: 09510550  
PATENT NUMBER:

FILING DATE: 02/22/2000  
ISSUE DATE:

DIANE RUSSELE, PARALEGAL  
ASSIGNMENT DIVISION  
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